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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/573,333 | 06/23/2008 | Ludger Heiliger | PO-8233/RC-231 | 5431 |
| 34947 7590 08/31/2010 LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112 | | | | |
| EXAMINER | | | | |
| NUTTER, NATHAN M | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1796 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 08/31/2010 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,333

Applicant(s)

HEILIGER ET AL.

Examiner

Nathan M. Nutter

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

The election of species requirement of 18 May 2010 is hereby expressly withdrawn.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11, 13, 16-19, 21-23 and 25-27 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12, 15-19 and 23-30 of copending Application No. 10/573,217 (US 2007/0232733) Ziser et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the thermoplastic materials and microgels of the copending application may embrace those recited and claimed herein.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 11-13, 15-18, 21-23 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Piejko et al (US 5,237,001).

The reference to Piejko et al teaches the manufacture of thermoplastic compositions of polyurethanes and partly crosslinked alkyl acrylate copolymers to make injection-molded and extruded articles. The compositions can further comprise another copolymer selected from the group found in the abstract and columns 4-5. Said graft copolymers can be prepared by known process, such as emulsion polymerization. The grafting base of said graft copolymer is a rubber-like polymer having a Tg of 0, preferably -30°C. The average particle size of said graft copolymer is from 0.05 to 0.8 mm and has a gel content of >50%. Per examples the graft copolymer has a gel content of above 90%. Said polyurethane appears to anticipate applicant's thermoplastic polymer. The partly crosslinked alkyl methacrylate copolymers are formed by emulsion polymerization have a gel content of at least 70% by weight and an average (d50 value) particle size from 0.07 to 0.5 mm (70 to 500 nm). The partially crosslinked alkyl methacrylate polymer is crosslinked via radical polymerization with a crosslinking compound. Note column 4. Thus the limitation of "not been crosslinked by high-energy radiation" is satisfied. The particle size appears to anticipate claims 3-5. Per example, Piejko et al teaches gel content of said alkyl methacrylate copolymer is 92%. This appears to anticipate claim 7. Also per example at least one of the thermoplastic polyurethanes has a Vicat softening temperature of 155°C. This appears to anticipate claim 12. The composition comprises 10 to 90 parts by weight of the thermoplastic polyurethane and 10 to 90 parts by weight of the alkyl methacrylate particles. This ratio appears to anticipate claims 15, 16 and 27. In addition to the above components, the composition can also comprise conventional additives. Note column 8, line 4 (production

of the molding composition section D). Per examples, it appears that said alkyl methacrylate particles and the grafted particles are prepared before addition to the thermoplastic polyurethane polymer.

Claims 1-7, 10, 11, 13, 15-19, 21-23 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Linder et al (US 5,075,380).

The patent to Linder et al teaches the production of soft thermoplastically processible polymer alloys containing polyamides. Said alloy et al comprises 10 to 50% by weight of a cyclo (aliphatic) polyamide and 90 to 50% by weight of a crosslinked particulate alkyl acrylate copolymer. Said crosslinked particulate alkyl acrylate copolymers are obtain from the components found in column 1 (lines 45-65) by emulsion polymerization. Note column 3 (lines 20-25). Said polyamides are described in column 2. The crosslinked particulate alkyl acrylate copolymer has an average particles diameter (d50) from 0.09 to 1.2 mm, preferably from 0.1 to .4 mm and gel content preferably from 70 to 90% by weight. The crosslinked particulate alkyl acrylate copolymer is crosslinked in a free radical method using a crosslinking compound or by peroxide treatment. The Examiner deems that non-irradiation crosslinked particles are envisioned within the reference even though radiation crosslinking is disclosed. In addition to the polyamide and crosslinked particulate alkyl acrylate copolymer, the composition can also comprise conventional additive. Note column 3 (lines 40-45). Linder et al teaches the alloy can be prepared by conventional methods such as mixing the crosslinked particulate alkyl acrylate copolymer after polymerization and drying into

the polyamide with other additive by means of a compounding machine (apparatus), mixing screws or rollers at an elevated temperature. Note column 3 (lines 48-57) and the examples.

Claims 1-6, 8, 9, 11-19, 21-23 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by McKee et al (US 4,694,042). The reference to McKee et al teaches the manufacture of elastomeric thermoplastic molding materials and preparation thereof. Said molding materials are obtained from a composition comprising (a) from 5 to 50 parts by volume of a partially or completely crystalline thermoplastic polymer having a T_m of above 160°C, (b) from 95 to 50 parts by volume of one or more crosslinked elastomeric polymer having a T_g of below -10°C and (c) conventional addition, wherein the Vicat softening temperature of the composition is 5 to 40 °C lower than the mixture of A and B. The thermoplastic polymer (a) can be found in columns 1 to 3 (line 20). The elastomeric polymers (b) are explained in columns 3 to column 4, wherein it is disclosed these are emulsion polymerized. Note see column 3 and the Examples. Wherein the swelling index of said polymer is from 2 to 8 in toluene. Note column 4 (lines 15-18). From the examples, said elastomeric polymer (b) has a particle size of 0.4 μm (400 nm). This appears to anticipate claim 3 Even though the examples state said particles are mono-dispersed, the Examiner deems that claim 3 is anticipated because the differences in particles will be less than 250%, i.e., 0. Thus claim 3 is read in the reference. Said elastomeric polymers are disclosed as having adhesion-promoting groups. Note column 3 (lines 55-62). This appears to anticipate

claim 19. The additive can be found in column 4 (lines 28-41). The process set forth by McKee et al in the examples appears to anticipate applicant's process claims 18, 21 and 22. The product obtained by the process is deemed to anticipate claim 23. Regarding claim 14, McKee et al per the table in column 6 teaches the Vicat softening temperature for example 1 is 181 and example 2 is 192 and by definition the softening point of the mixture is at 5 to 40 °C below that of the thermoplastic polymer. Thus, by deduction the softening points of the thermoplastic polymer, from examples 1 and 2, would be between 176 to 141 for example 1 and between 187 to 150 for example 2 which is above the at least 50 °C as recited in instant claim 11.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nathan M. Nutter/
Primary Examiner, Art Unit 1796

nmn

29 August 2010